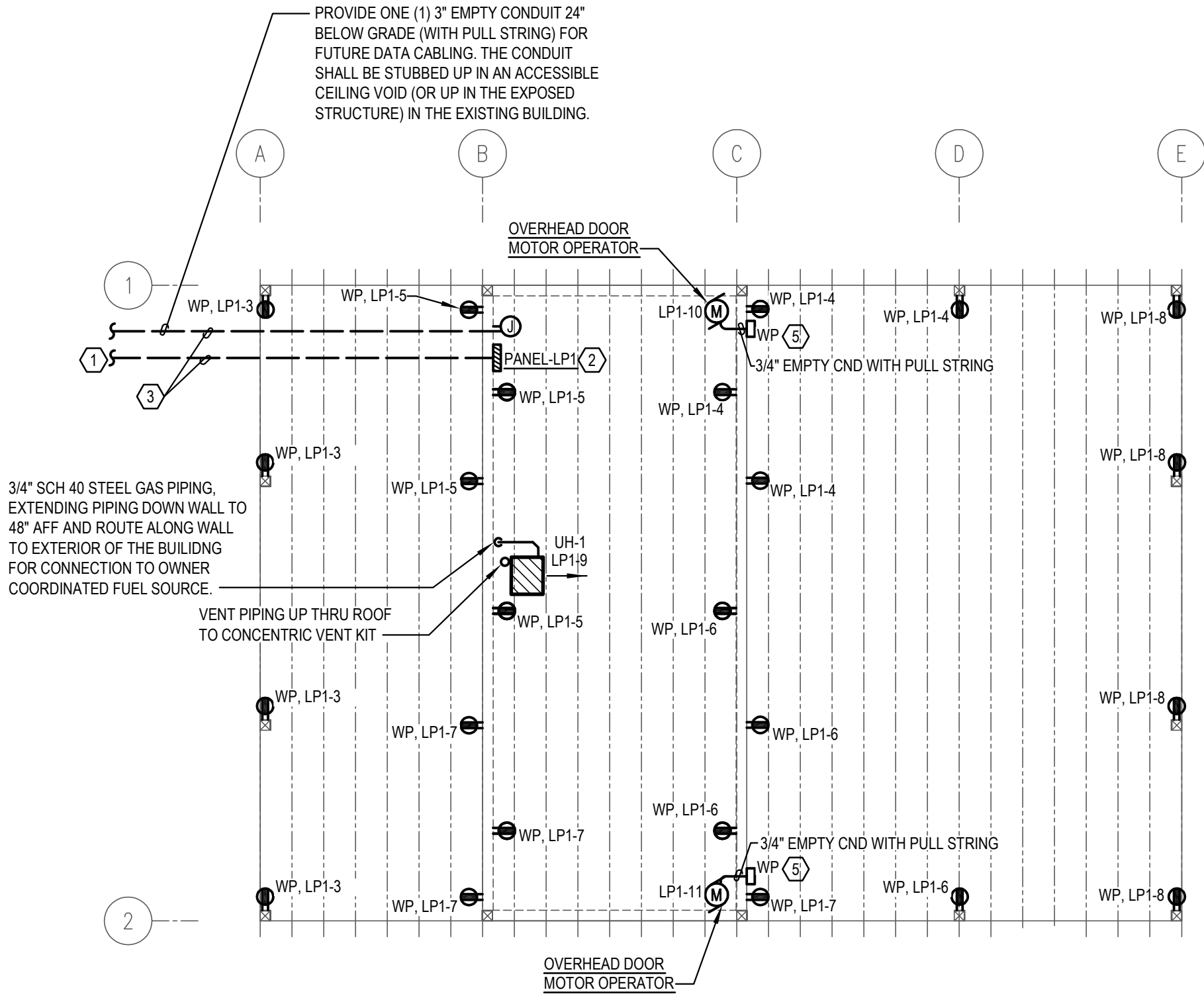


FLOOR PLAN - LIGHTING

SCALE: 1/8" = 1'-0"



FLOOR PLAN - POWER AND HEATING

SCALE: 1/8" = 1'-0"

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MOUNTING	LAMP TYPE	BASIS OF DESIGN MANUFACTURER AND CATALOG NO.	REMARKS
A1	CEILING/ SUSPENDED	LED	LITHONIA FEM4 LED 4L IMACD WLF MHCH 36	MOUNT 16'-0" AFF TO BOTTOM
A2	WALL/ SURFACE	LED	NEW STAR SCC14-HC-OC-L2-40-1-A-UN	MOUNT 14'-0" AFF TO BOTTOM
B1	WALL/ SURFACE	LED	LITHONIA EU2 LED M12 120/277 1.8WHEAD EMERGENCY LIGHTING UNIT	MOUNT 14'-0" AFF TO BOTTOM
B2	WALL/ SURFACE	LED	LITHONIA OLWX1 LED 40W 40K 120 PE	MOUNT 15'-0" AFF TO BOTTOM

GENERAL NOTES (LIGHTING FIXTURE SCHEDULE):

- OTHER MANUFACTURERS WILL BE CONSIDERED (IN ADDITION TO WHAT IS LISTED) IF THEY ARE EQUAL TO WHAT IS SPECIFIED.

HVAC EQUIPMENT NOTES:

UNIT HEATER (UH-1) SHALL BE A MODINE MODEL HDS 60, DUAL FUEL PROPANE AND NATURAL GAS, SINGLE STAGE, DIRECT SPARK IGNITION, BTU/HR INPUT: 60,000, BTU/HR OUTPUT: 48,000, MOTOR HP: 1/12, ELECTRICAL PHV: 1PH115V, AND MOUNT AT 12'-0" A.F.F.

NOTES:

- FURNISH GAS REGULATOR, SHUT OFF VALVES AND ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE FUEL TYPE TO BE USED WITH OWNER.
- A VERTICAL CONCENTRIC VENT KIT SHALL BE PROVIDED TO ALLOW THE VENT OUTLET AND COMBUSTION AIR INLET PIPES TO PENETRATE THE BUILDING ROOF THROUGH ONE OPENING.

PANEL LP1																										
VOLTAGE: 208Y/120V SYSTEM: 3PH 4W SOLID NEUTRAL: YES						MAIN: 60A MCB BUS RATING: 100A GROUND BUS: YES						INTEGRAL SPD: NO MOUNTING: SURFACE INTERRUPT RATING: 10,000 AIC														
CKT	LOAD SERVED			BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED			BKR	PHASE	NEUT	GND	COND	L1	L2	L3			
1	LTG			20/1	#12	#12	#12	1/2"	1			2	LTG			20/1	#12	#12	#12	1/2"	1.07			L3		
3	REC			20/1	#12	#12	#12	1/2"		.72		4	REC			20/1	#12	#12	#12	1/2"		.72				
5	REC			20/1	#12	#12	#12	1/2"			.72	6	REC			20/1	#12	#12	#12	1/2"			.72			
7	REC			20/1	#12	#12	#12	1/2"	.72			8	REC			20/1	#12	#12	#12	1/2"	.72					
9	UNIT HEATER			15/1	#12	#12	#12	1/2"		.39		10	OVERHEAD DOOR (3/4 HP)			25/1	#10	#10	#10	3/4"		1.66				
11	OVERHEAD DOOR (3/4 HP)			25/1	#10	#10	#10	3/4"			1.66	12	SPARE			20/1	-	-	-	-			-			
13	SPARE			20/1	-	-	-	-	-			14	SPARE			20/1	-	-	-	-	-					
15	SPARE			20/1	-	-	-	-	-	-		16	SPARE			20/1	-	-	-	-	-	-				
17	SPACE ONLY			-	-	-	-	-	-	-	-	18	SPACE ONLY			-	-	-	-	-	-	-	-			
19	SPACE ONLY			-	-	-	-	-	-	-	-	20	SPACE ONLY			-	-	-	-	-	-	-	-			
21	SPACE ONLY			-	-	-	-	-	-	-	-	22	SPACE ONLY			-	-	-	-	-	-	-	-			
23	SPACE ONLY			-	-	-	-	-	-	-	-	24	SPACE ONLY			-	-	-	-	-	-	-	-			
PROVIDE NEMA-12 ENCLOSURE																					PHASE LOAD TOTALS			3.63	3.49	3.1
LOADS (KVA)												LOADS (KVA)														
CONNECTED				DEMAND FACTOR				DEMAND				CONNECTED				DEMAND FACTOR				DEMAND						
LIGHTING				2.19				1.25				0				1.0				0						
REC TO 10 KVA				4.32				1.0				0				1.25				0						
REC REMAINING				0				0.5				0				1.0				0						
SPACE HEATING				.39				1.0				.39														
AIR CONDITIONING				0				0.0				0														
NON-SEASONAL MOTORS				3.32				1.0				3.32														
LARGEST MOTOR				1.66				0.25				.41														
WATER HEATING				0				1.0				0														
												TOTAL CONNECTED LOAD				10.2				KVA						
												MIN. FEEDER / PANEL CAPACITY				11.2				KVA						
												OVERALL DEMAND FACTOR				1.09										

ELECTRICAL LEGEND

MTG. HGT.	SYMBOL	DESCRIPTION
		PLAN NOTE DESIGNATION.
		LIGHTING FIXTURE TYPE DESIGNATION.
		LIGHTING FIXTURE, LED, CHAIN PENDANT MOUNTED. SYMBOL SIZE VARIES WITH LIGHTING FIXTURE TYPE.
		LIGHTING FIXTURE, LED, WALL MOUNTED. SYMBOL SIZE VARIES WITH LIGHTING FIXTURE TYPE.
		LIGHTING FIXTURE, LED, WALL MOUNTED.
		EMERGENCY LIGHTING UNIT, SELF-CONTAINED, SURFACE WALL MOUNTED WITH INTEGRAL BATTERY AND UNIT MOUNTED LIGHTING HEADS.
4'-0"		GENERAL USE SWITCH, THREE WAY.
1'-10" TO BOT		RECEPTACLE, DUPLEX GFCI, WALL.
1'-10" TO BOT		JUNCTION BOX, WALL.
6'-0"		208/120 VOLT PANELBOARD.
		ELECTRIC MOTOR CONNECTION.
2HB1-24		CIRCUIT DESIGNATION. DESIGNATION SHOWN INDICATES PANEL 2HB1 AND CIRCUIT NUMBER 24.
		CONDUIT EXPOSED.
		CONDUIT CONCEALED IN OR BELOW FLOOR SLAB OR BELOW GRADE.
A, AMPS		AMPS
AIC		AMPERES INTERRUPTING CAPACITY
BKR		CIRCUIT BREAKER
BOT		BOTTOM
CKT		CIRCUIT
CND		CONDUIT
CND		CONDUCTOR
GND		GROUND
HGT		HEIGHT
KVA		KILO-VOLT AMPERE
LED		LIGHT EMITTING DIODE
L1		PHASE A
L2		PHASE B
L3		PHASE C
MIN		MINIMUM
MLO		MAIN LUGS ONLY
MTG		MOUNTING
NEUT		NEUTRAL
PH		PHASE
SPD		SURGE PROTECTIVE DEVICE
W		WATT OR WIRE
WP		WEATHERPROOF

NOTES (ELECTRICAL LEGEND):

- THESE ARE STANDARD ELECTRICAL SYMBOLS AND MAY NOT ALL APPEAR ON THE PROJECT DRAWINGS. HOWEVER, WHEREVER AN ELECTRICAL SYMBOL APPEARS ON THE PROJECT DRAWINGS, THE ITEM SHALL BE FURNISHED AND INSTALLED.
- MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO TOP OF OUTLET OR EQUIPMENT, UNO, WHERE THE MOUNTING HEIGHT INDICATED ON THE DRAWINGS IS DIFFERENT FROM THE LEGEND, THE DRAWING TAKES PRECEDENT. SEE DRAWINGS FOR MOUNTING HEIGHTS NOT INDICATED IN THE LEGEND.
- SEE ELECTRICAL ABBREVIATIONS FOR ALPHABETIC SUBSCRIPT WITH SYMBOL, UNO.

GENERAL NOTES:

- ALL TYPE A1 LED LIGHT FIXTURES SHALL BE MOUNTED EVEN WITH THE BOTTOM OF THE TRUSSES. THE FIXTURES SHALL BE SUSPENDED FROM THE STRUCTURE ABOVE USING JACK CHAIN. PROVIDE ALL SUPPORTS AND CHAIN REQUIRED FOR FIXTURE MOUNTING.
- ALL CONDUITS SERVING THE NEW LIGHT FIXTURES SHALL BE RUN PARALLEL TO THE TRUSSES AND BUILDING WALLS. CONDUITS SHALL BE SECURED TO THE SIDE OF THE TRUSSES WHEREVER POSSIBLE. MINIMIZE THE LENGTH OF FIXTURE WHIPS.
- ALL BIDDERS SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS FOR THE CONDUITS RUNNING FROM THE EXISTING BUILDING TO THE NEW POLE BARN (DISTANCE, ETC.). CHANGE ORDERS WILL NOT BE APPROVED FOR BIDDERS FAILING TO GATHER THESE EXISTING CONDITIONS DURING BIDDING.

PLAN NOTES:

- PROVIDE ONE (1) 3-POLE 60 AMP CIRCUIT BREAKER OF MATCHING FRAME, INTERRUPT RATING AND TYPE IN EXISTING PANEL-LM2 TO SERVE PANEL-LP1. PANEL-LM2 IS LOCATED ON THE BACK WALL IN THE EXISTING GARAGE/WAREHOUSE LOCATED ADJACENT TO THE AREA OF WORK. PANEL-LM2 IS A SIEMENS 208Y/120V-3PH-4W-400 AMP PANELBOARD. REMOVE 3 EXISTING SPARE 1-POLE BREAKERS IN PANEL-LM2 TO ACCOMMODATE THE NEW BREAKER (TURN OVER TO OWNER).
- PROVIDE (3) #4 PHASE, (1) #4 NEUTRAL AND (1) #6 GROUND CONDUCTOR IN 1-1/4" CONDUIT FROM PANEL-LM2 TO SERVE PANEL-LP1. THE APPROXIMATE LENGTH FROM THE EXISTING PANEL TO THE NEW PANEL IS 150 FEET. CONTRACTOR SHALL FIELD VERIFY LENGTH. ALSO, DRIVE A 10' x 5/8" COPPER-CLAD GROUND ROD JUST OUTSIDE THE POLE BARN, AND CONNECTED TO PANEL-LP1 GROUND BAR WITH #6 COPPER (DO NOT CONNECT NEUTRAL AND GROUND BARS TOGETHER) - ROD SHALL BE AT LEAST 24" BELOW GRADE. PANEL-LP1 GROUND BAR SHALL ALSO BE CONNECTED TO BUILDING STEEL AND REBAR AS REQUIRED BY NEC 250.52(A)(2) AND (3) WITH #6 COPPER.
- THE NEW CONDUITS SHALL BE RUN UP HIGH IN THE EXISTING WAREHOUSE STRUCTURE AT A HEIGHT APPROXIMATELY EVEN WITH THE EXISTING CONDUITS. THE CONDUITS SHALL TURN DOWN ON THE EXTERIOR OF THE EXISTING BUILDING ON THE EXTERIOR WALL WITH LB FITTINGS, AND SHALL GO BELOW GRADE. THE CONDUITS SHALL BE RUN 24" BELOW GRADE IN THE SAME TRENCH (CUT AND PATCH-TO-MATCH ASPHALT/CONCRETE) AND SHALL TURN UP WHERE INDICATED ON PLAN. PROVIDE PULL BOXES AS NECESSARY WITH SIZES AS REQUIRED BY THE 2011 NEC TO ACHIEVE THIS ROUTING (NO MORE THAN 360 DEGREES OF BENDS BETWEEN PULL POINTS). THE COMMUNICATIONS CONDUIT SHALL TERMINATE IN A 12"x12"x6" NEMA-12 BOX WITH REMOVABLE COVER AS INDICATED IN THE POLE BARN.
- CONNECT THE EMERGENCY LIGHTING UNIT TO CIRCUIT LP1-1 AHEAD OF ANY LOCAL SWITCHING. MOUNT THE UNIT 14'-0" AFF TO BOTTOM.
- OVERHEAD DOOR CONTROL STATION FURNISHED BY THE DOOR MANUFACTURER AND INSTALLED BY THE CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURE FOR THE DOOR CONTROLS. MOUNT AT HEIGHT AT DIRECTED BY THE DOOR MANUFACTURER.

SYCAMORE AVENUE POLE BARN
ELECTRICAL AND HEATING
ROANOKE, VIRGINIA

FLOOR PLANS, LEGEND, NOTES AND SCHEDULES

DESIGNED RGW/SSL	DRAWN RGW/SSL
CHECKED RWH/RCH	APPROVED LPA
COMM. NO. 16101.21	DATE 06-03-16

SHEET

ME-1

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